

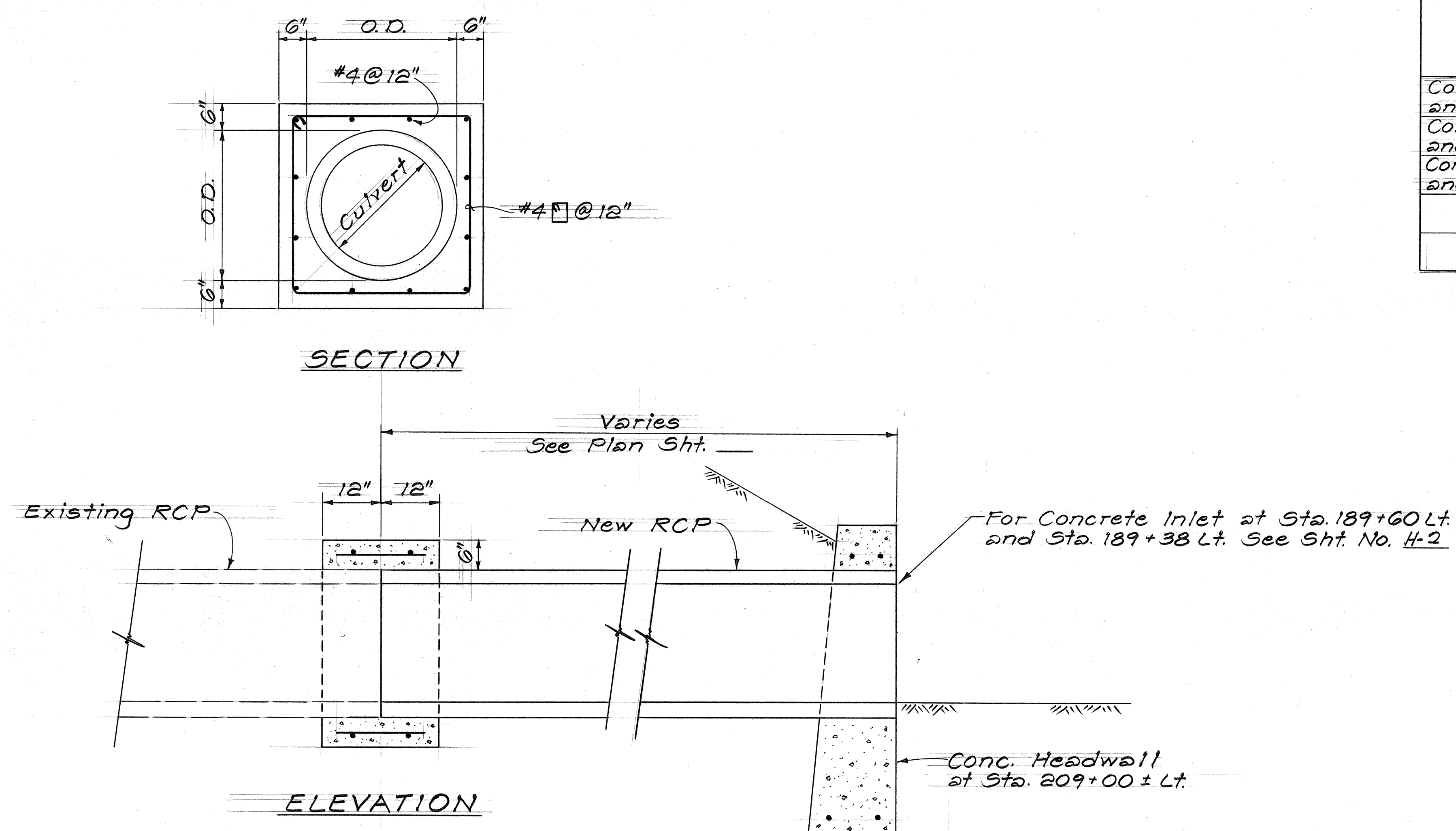
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HES-099-1(8)	1985	24	43

GENERAL NOTES:

1. Demolishing and removing a portion or the entire existing structure shall not be paid for separately, but shall be considered incidental to the various contract items.
2. Contractor shall verify the locations of all culverts in the field. Any culvert damaged during construction shall be repaired or replaced by the contractor at his expense.

In the event of plan alterations causing increase or decrease to the quantity of specified lump sum work, the following estimated quantities shall be used to determine theoretical unit price as defined in subsection 104.02(B) lump sum items:

ITEM NO.		206	503	602					
UNIT USED		1001	0011	1001					
		C.Y.	C.Y.	Lbs.					
STRUCTURE	STATION	Structure Excavation other than at Bridges	Class A Concrete other than in Bridges	Reinforcing Steel other than in Bridges					
Concrete Inlet and Collar	Sta. 189+60±Lft.	8.0	3.2	310					
Concrete Inlet and Collar	Sta. 189+38±Lft.	6.0	3.2	310					
Concrete Headwall and Collar	Sta. 209+00±Lft.	11.0	3.0	85					
Total		25.0	9.4	705					



DETAIL OF CONCRETE COLLAR AND PIPE EXTENSION
Scale: 3/4" = 1'-0"

ORIGINAL PLAN	SURVEY PLOTTED BY _____ DATE _____	
NOTE BOOK	DRAWN BY _____	_____
	DESIGNED BY _____	_____
	QUANTITIES BY _____	_____
	CHECKED BY _____	_____
No. _____		

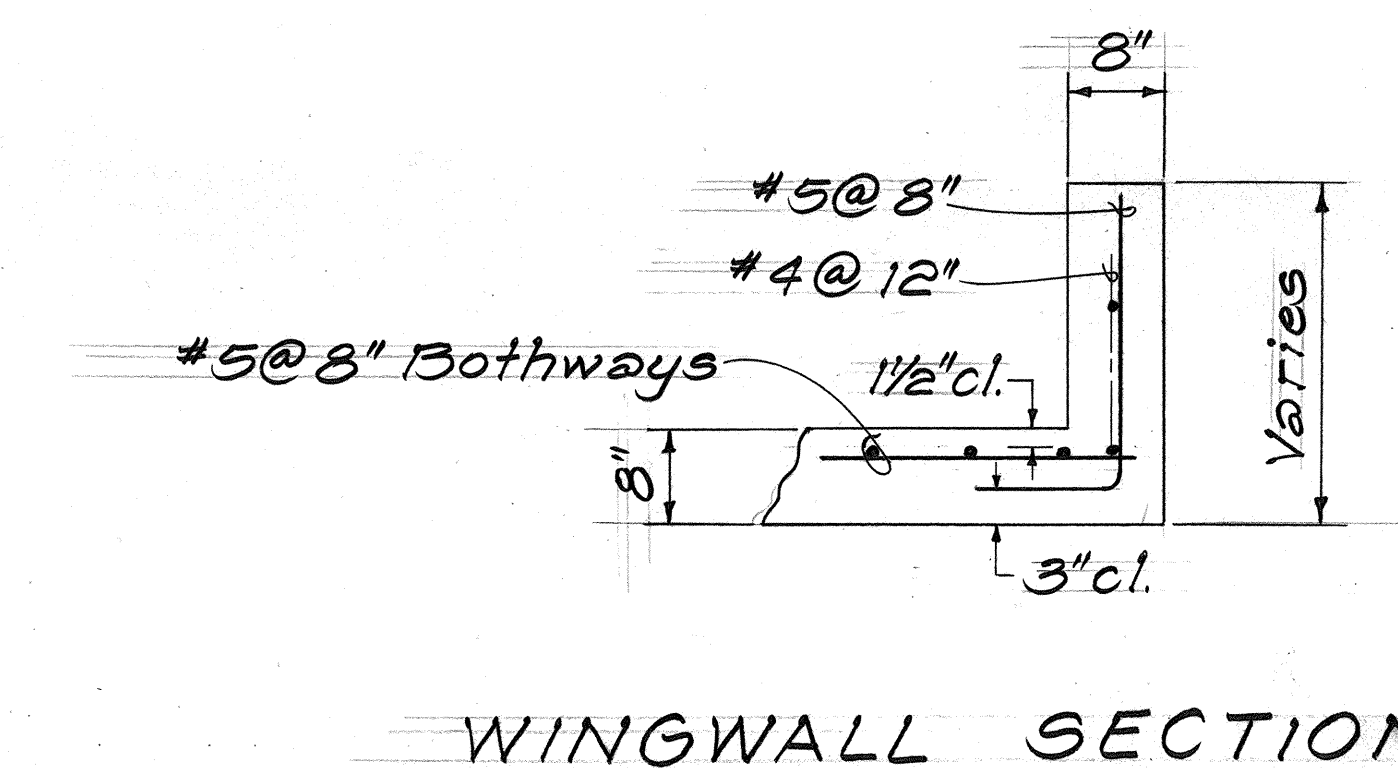
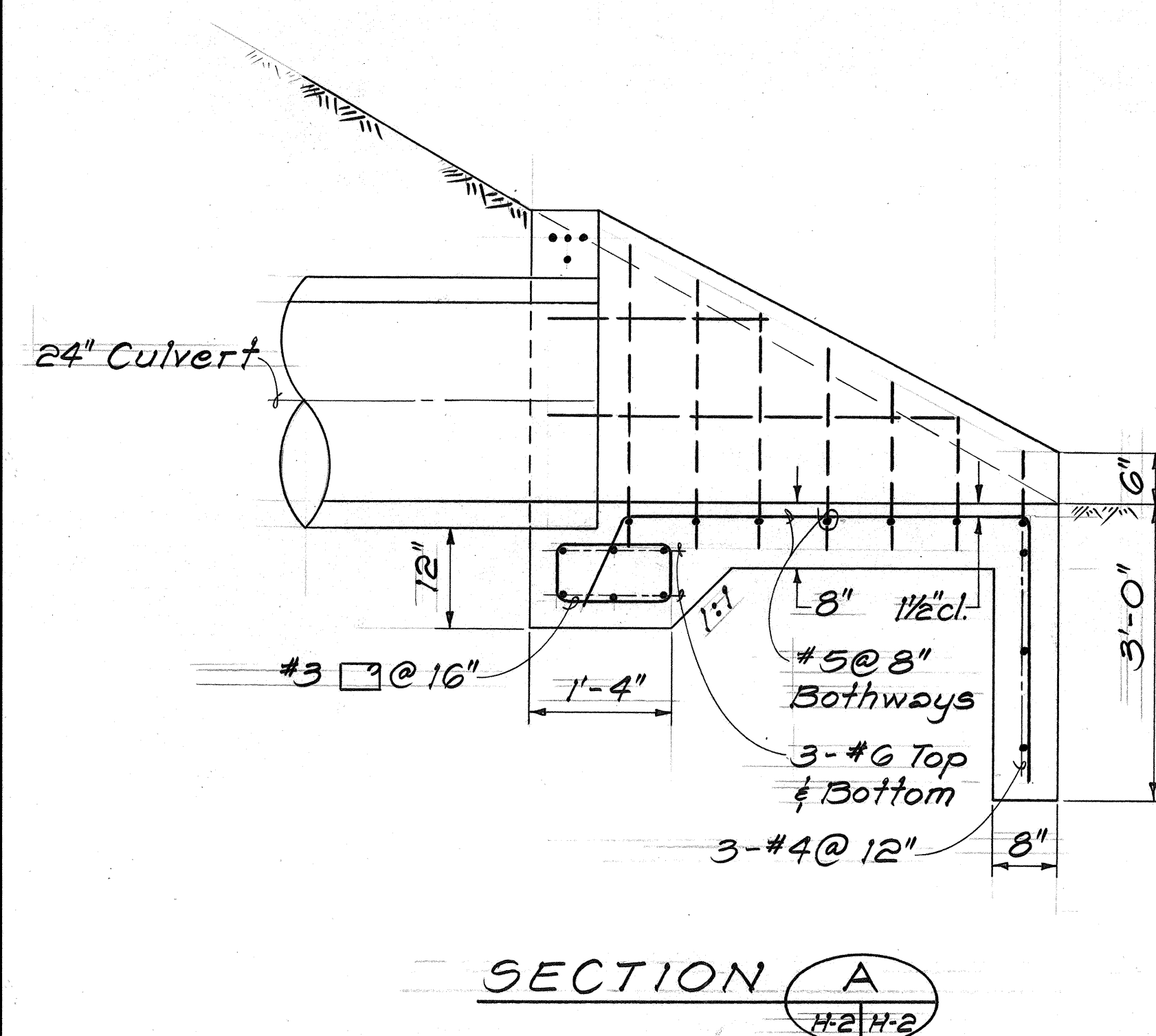
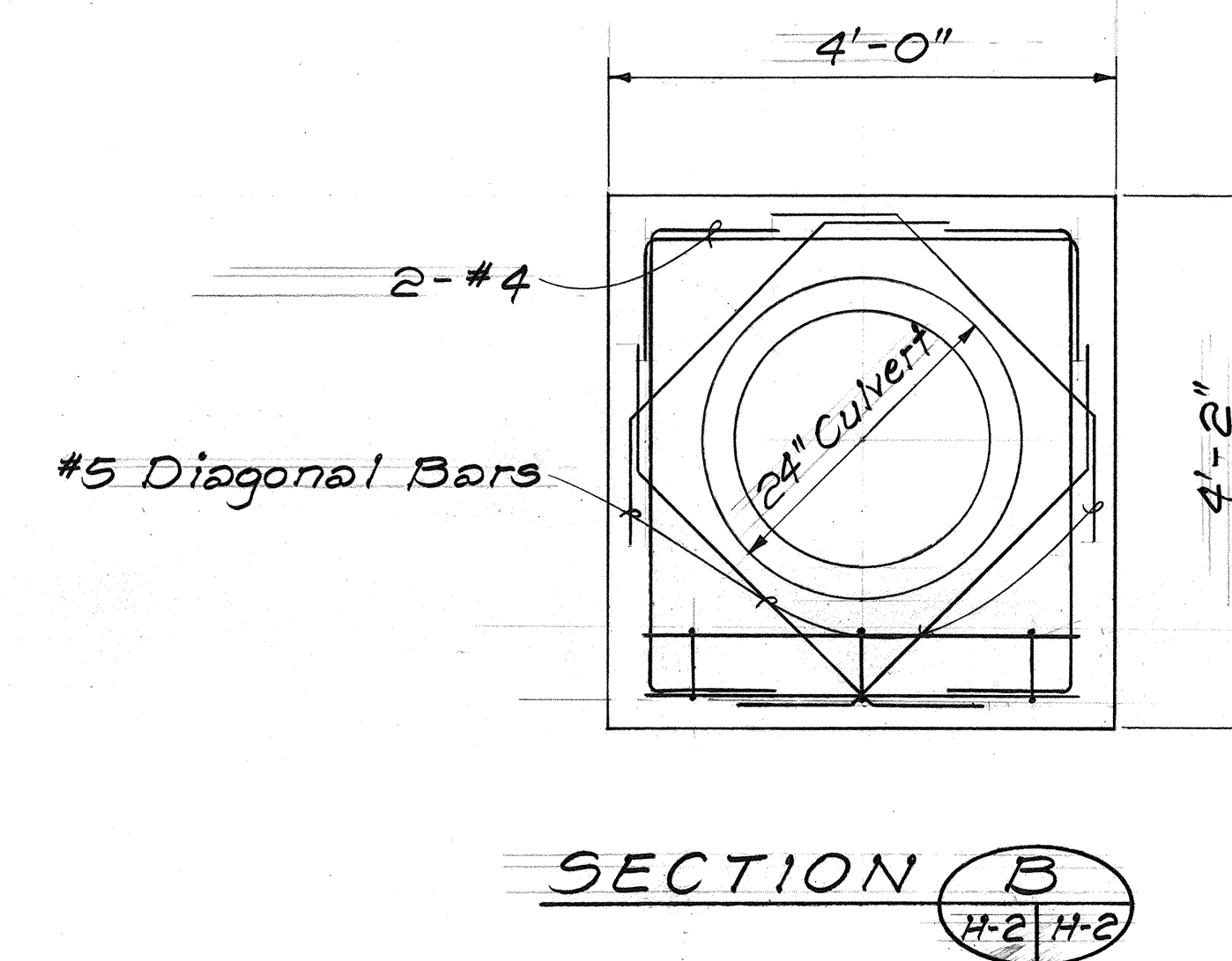
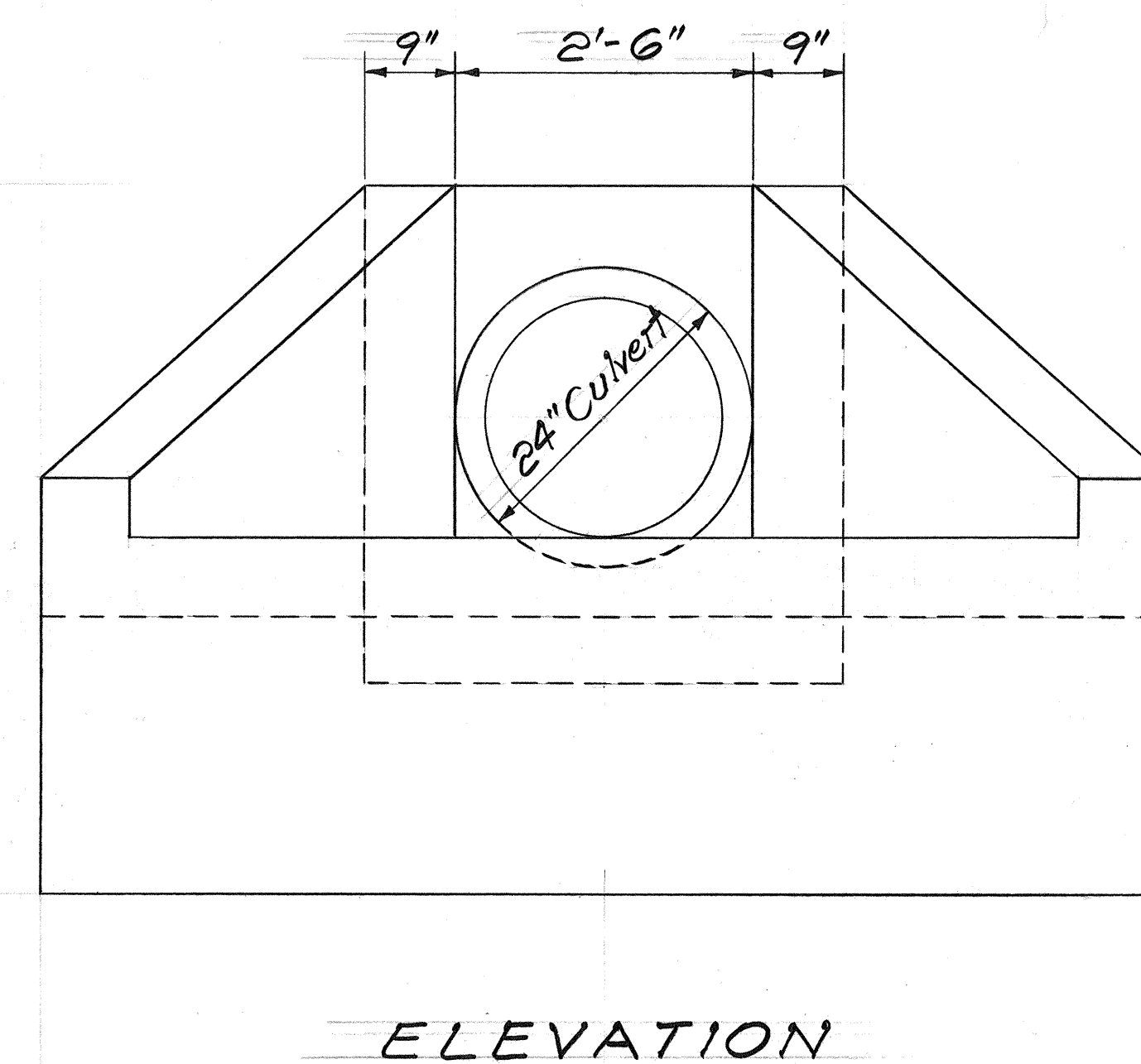
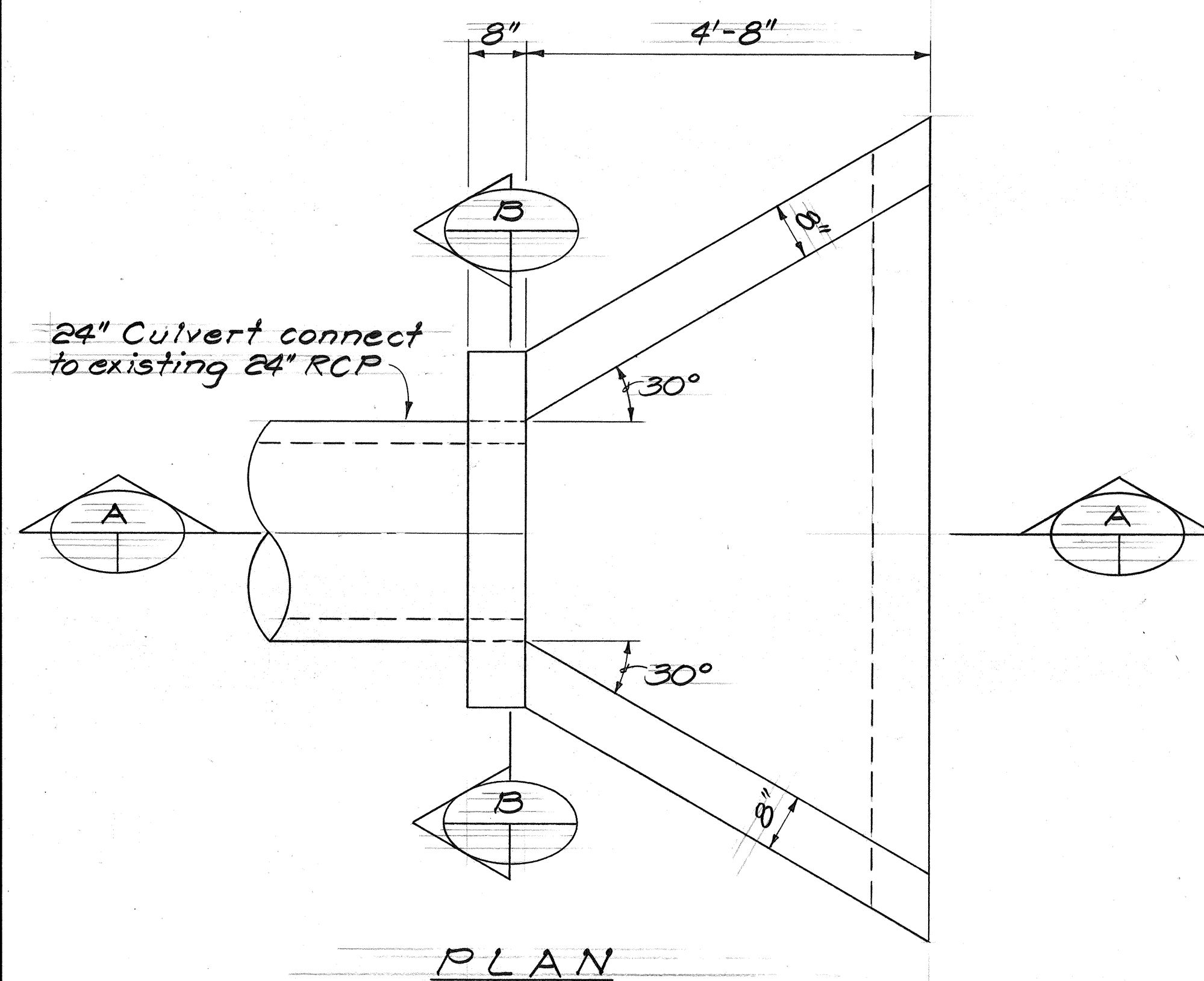
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAIL

GUARD RAIL AND SHOULDER
IMPROVEMENTS ON ROUTE 99
Mililani to Weed Junction
F.A. PROJ. NO. HES-099-1(8)
Scale: As Noted Date: Nov. 1984

SHEET No. H-1 OF H-3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HES-099-1(8)	1985	25	43

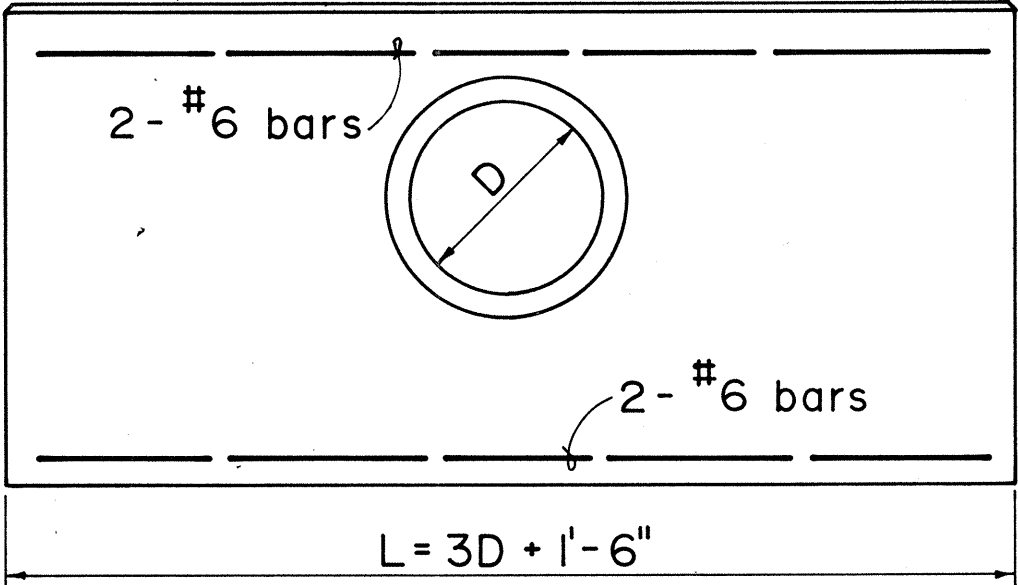


DETAIL OF CONCRETE INLET AT STA. 189+60 LT. AND STA. 189+38 LT.

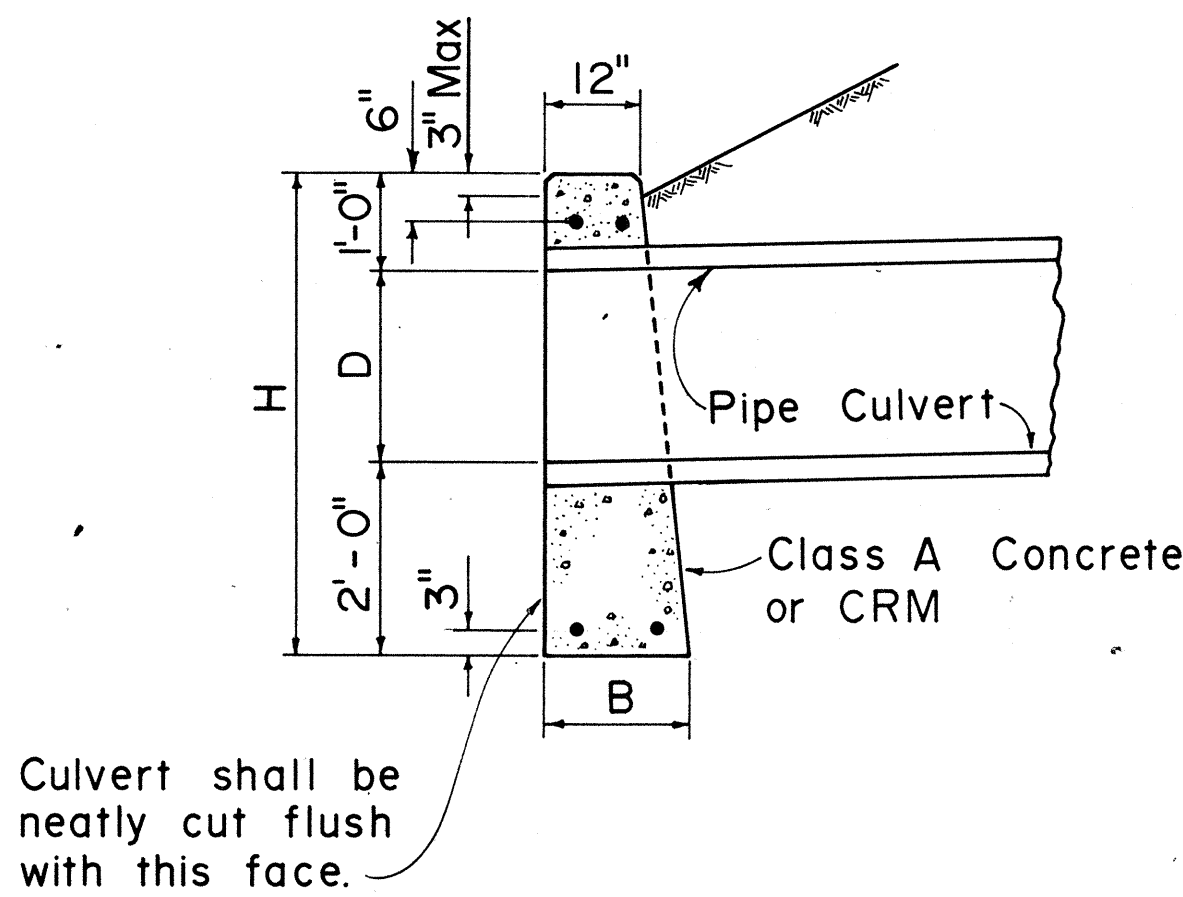
STATE OF HAWAII	
DEPARTMENT OF TRANSPORTATION	
HIGHWAYS DIVISION	
<u>DRAINAGE DETAIL</u>	
GUARD RAIL AND SHOULDER	
IMPROVEMENTS ON ROUTE 99	
Mililani to Weed Junction	
F.A. PROJ. NO. HES-099-1(8)	
Scale: 3/4" = 1'-0"	Date: Nov. 1984
SHEET No. H-2 OF H-3 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HES-079-118	1985	26	43

Chamfer all exposed edges one inch



ELEVATION



SECTION

DATA FOR CONC. HDWL.			
D	B	L	H
18"	1'-6"	6'-0"	4'-6"
24"	1'-6"	7'-6"	5'-0"
30"	2'-0"	9'-0"	5'-6"
36"	2'-0"	10'-6"	6'-0"
42"	2'-6"	12'-0"	6'-6"
48"	2'-6"	13'-6"	7'-0"

DATA FOR CRM HDWL.			
D	B	L	H
18"	1'-9"	6'-0"	4'-6"
24"	2'-0"	7'-6"	5'-0"
30"	2'-3"	9'-0"	5'-6"
36"	2'-6"	10'-6"	6'-0"

CONCRETE OR CRM HEADWALL

APPROVAL RECOMMENDED:
T. Takano 6-19-79
 HYDRAULIC DESIGN ENGINEER DATE
 APPROVED:
Herbert Zaleishi 6-22-79
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1.	Supersedes Sht. DH 10 approved 12-17-69	H.T.	6/22/79
2.	Change Class of concrete	H.T.	12/4/80

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
 CONCRETE OR CEMENT
 RUBBLE MASONRY HEADWALLS

Not To Scale
 Date: June 1979

SHEET No. H-3 OF H-3 SHEETS DH10

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
No.	CHECKED BY	